USGS science for a changing world

Earthquake Shaking — Yellow Alert

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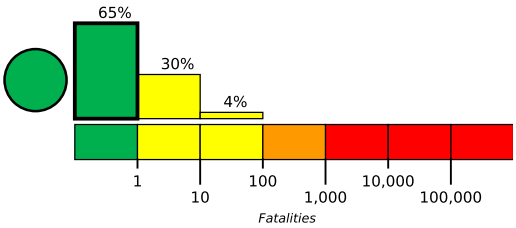
M 5.9, 13km SE of Guanica, Puerto Rico

Origin Time: 2020-01-11 12:54:45 UTC (Sat 08:54:45 local)
Location: 17.9490° N 66.8508° W Depth: 5.0 km

PAGER Version 7

Created: 3 hours, 21 minutes after earthquake

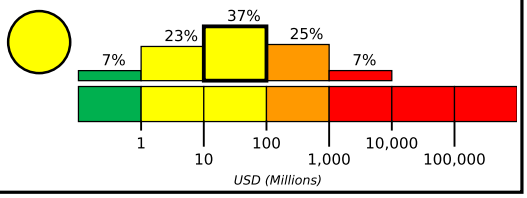
Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Puerto Rico. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses

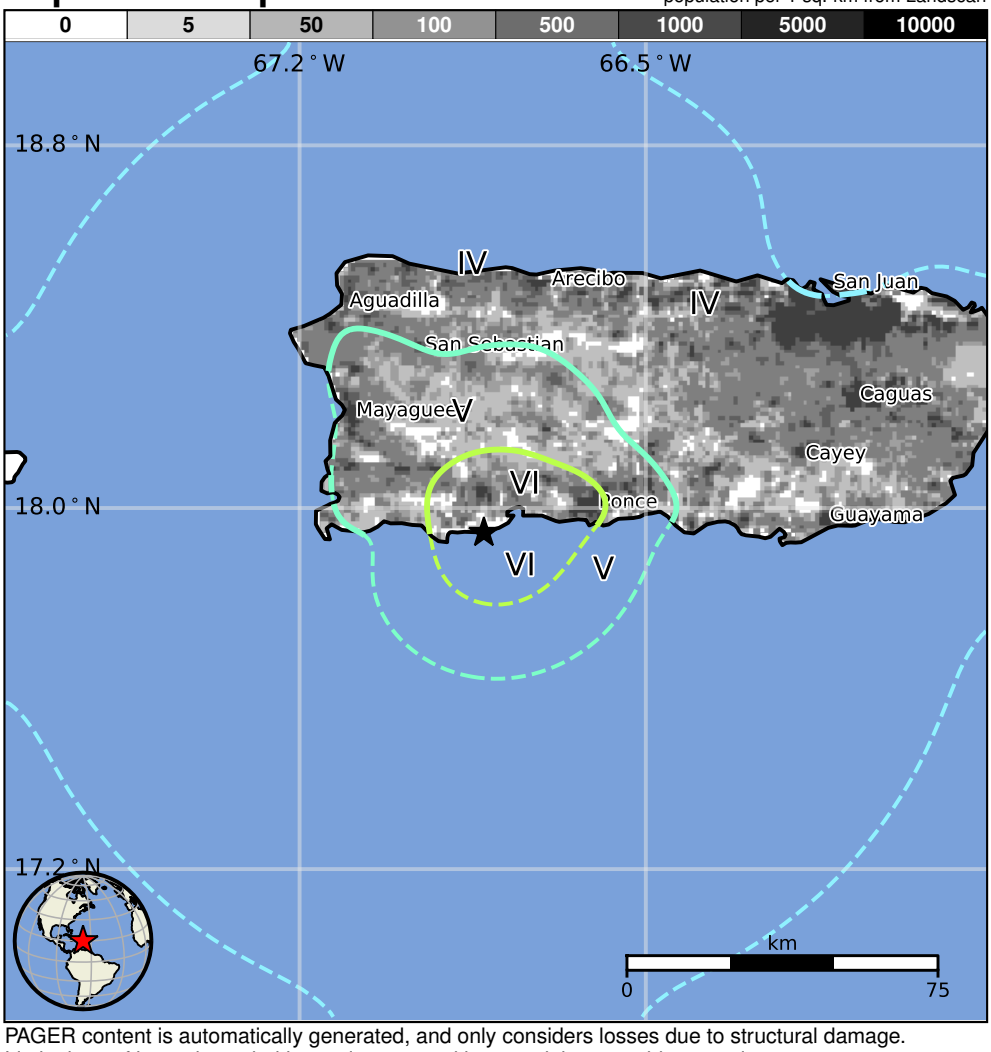


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	59k*	2,471k	454k	208k	9k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are mud wall and informal (metal, timber, GI etc.) construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1979-03-23	235	6.6	VI(605k)	0
1980-11-12	334	5.9	VII(87k)	–
1984-06-24	266	6.7	VII(326k)	5

Selected City Exposure

from GeoNames.org

MMI	City	Population
VII	Indios	2k
VI	Maria Antonia	1k
VI	Guanica	9k
VI	Palomas	2k
VI	Guayanilla	5k
VI	Fuig	1k
VI	**Ponce**	**153k**
IV	Carolina	170k
IV	**Caguas**	**87k**
IV	Bayamon	203k
III	**San Juan**	**418k**

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/pr2020011010#pager

Event ID: pr2020011010